

Literature Compendium

Publications presenting Confocal Laser Endomicroscopy in Neurosurgery using fluorescein sodium (FNa)



May 2020

Articles based on ZEISS CONVIVO¹:

1. Belykh E, Miller EJ, Patel AA, Yazdanabadi MI, Martirosyan NL, Yağmurlu K, Bozkurt B, Byvaltsev VA, Eschbacher JM, Nakaji P, Preul MC.

Diagnostic Accuracy of a Confocal Laser Endomicroscope for In Vivo Differentiation Between Normal Injured And Tumor Tissue During Fluorescein-Guided Glioma Resection: Laboratory Investigation.

World Neurosurg. 2018 Jul;115:e337-e348. Epub 2018 Apr 17.

DOI: [10.1016/j.wneu.2018.04.048](https://doi.org/10.1016/j.wneu.2018.04.048)

2. Belykh E, Patel AA, Miller EJ, Bozkurt B, Yağmurlu K, Woolf EC, Scheck AC, Eschbacher JM, Nakaji P, Preul MC.

Probe-based three-dimensional confocal laser endomicroscopy of brain tumors: technical note.

Dovepress. Cancer Management and Research. 2018:10

DOI: [10.2147/CMAR.S165980](https://doi.org/10.2147/CMAR.S165980)

3. Belykh E, Miller EJ, Carotenuto A, Patel AA, Cavallo C, Martirosyan NL, Healey DR, Byvaltsev VA, Scheck AC, Lawton MT, Eschbacher JM, Nakaji P, Preul MC

Progress in Confocal Laser Endomicroscopy for Neurosurgery and Technical Nuances for Brain Tumor Imaging With Fluorescein

Front. Oncol., 03 July 2019

DOI: [10.3389/fonc.2019.00554](https://doi.org/10.3389/fonc.2019.00554)

4. Fotteler M, Holl F, Käsbach C, Schlegel J, Swoboda W

Using confocal endomicroscopy for digital biopsy during brain surgery – presentation of a study protocol

ICT for Health Science Research, Proceedings of the EFMI 2019 Special Topic Conference; p. 237-238

DOI: [10.3233/978-1-61499-959-1-237](https://doi.org/10.3233/978-1-61499-959-1-237)

5. Schebesch KM, Rosengarth K, Brawanski A, Proescholdt M, Wendl C, Höhne J, Ott C, Lamecker H, Doenitz C

Clinical Benefits of Combining Different Visualization Modalities in Neurosurgery

Front. Surg., 01 October 2019

DOI: [10.3389/fsurg.2019.00056](https://doi.org/10.3389/fsurg.2019.00056)

¹ ZEISS CONVIVO is a class 3R laser product in compliance with IEC60825-1.

Articles based on the ZEISS CONVIVO precursor "OptiScan FIVE1":

1. Izadyyazdanabadi M, Belykh E, Mooney MA, Eschbacher JM, Nakaji P, Yang Y, Preul MC.
Prospects for Theranostics in Neurosurgical Imaging: Empowering Confocal Laser Endomicroscopy Diagnostics via Deep Learning.
Front Oncol. 2018 Jul 3;8:240.
DOI: [10.3389/fonc.2018.00240](https://doi.org/10.3389/fonc.2018.00240)
2. Martirosyan NL, Eschbacher JM, Kalani MYS, Turner JD, Belykh E, Spetzler RF, Nakaji P, Preul MC.
Prospective evaluation of the utility of intraoperative confocal microscopy in patients with brain neoplasms using fluorescein sodium: experience with 74 cases.
Neurosurg Focus Mar;40(3):E11 2016
DOI: [10.3171/2016.1.FOCUS15559](https://doi.org/10.3171/2016.1.FOCUS15559)
3. Eschbacher JM, Martirosyan NL, Nakaji P, Sanai N, Preul MC, Smith KA, Coons SW, Spetzler RF.
In vivo intraoperative confocal microscopy for real-time histopathological imaging of brain tumors.
J Neurosurg. 2012 Apr;116(4):854-60
DOI: [10.3171/2011.12.JNS11696](https://doi.org/10.3171/2011.12.JNS11696)
4. Sanai N, Eschbacher JM, Hattendorf G, Coons SW, Preul MC, Smith KA, Nakaji P, Spetzler RF.
Intraoperative Confocal Microscopy for Brain Tumors: A Feasibility Analysis in Humans.
Neurosurgery. 2011 Jun;68(2 Suppl Operative):282-90.
DOI: [10.1227/NEU.0b013e318212464e](https://doi.org/10.1227/NEU.0b013e318212464e)
5. Martirosyan NL, Georges J, Eschbacher JM, Cavalcanti DD, Elhadi AM, Abdelwahab MG, Scheck AC, Nakaji P, Spetzler RF, Preul MC.
Potential application of a handheld confocal endomicroscope imaging system using a variety of fluorophores in experimental gliomas and normal brain.
Neurosurg Focus. 2014 Feb;36(2):E16
DOI: [10.3171/2013.11.FOCUS13486](https://doi.org/10.3171/2013.11.FOCUS13486)
6. Peyre M, Clermont-Taranchon E, Stemmer-Rachamimov A, Kalamarides M.
Miniaturized handheld confocal microscopy identifies focal brain invasion in a mouse model of aggressive meningioma.
Brain Pathol. 2013 Jul;23(4):371-7
DOI: [10.1111/bpa.12039](https://doi.org/10.1111/bpa.12039)
7. Sankar T, Delaney PM, Ryan RW, Eschbacher JM, Abdelwahab M, Nakaji P, Coons SW, Scheck AC, Smith KA, Spetzler RF, Preul MC.
Miniaturized handheld confocal microscopy for neurosurgery: results in an experimental glioblastoma model.
Neurosurgery. 2010 Feb;66(2):410-7; discussion 417-8
DOI: [10.1227/01.NEU.0000365772.66324.6F](https://doi.org/10.1227/01.NEU.0000365772.66324.6F)

Review articles:

1. Belykh E, Cavallo C, Gandhi S, Zhao X, Veljanoski D, Izady Yazdanabadi M, Martirosyan NL, Byvaltsev VA, Eschbacher J, Preul MC, Nakaji P.

Utilization of intraoperative confocal laser endomicroscopy in brain tumor surgery.

J Neurosurg Sci. 2018

Aug 28, [Epub ahead of print]#

DOI: [10.23736/S0390-5616.18.04553-8](https://doi.org/10.23736/S0390-5616.18.04553-8)

2. Leierseder S.

Confocal endomicroscopy during brain surgery.

Laser+photonics. 2018 Jan 12; 76–79.

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